

I claim:

1. A substrate treatment device comprising:

at least two dielectric barrier discharge lamps;

a substrate which is moved in relation to the at least two dielectric barrier discharge lamps thereby irradiating the surface of the substrate with UV light from the at least two dielectric barrier discharge lamps, wherein a length for each of the at least two dielectric barrier discharge lamps in the lengthwise direction is less than a width of the substrate in a direction perpendicular to its transport direction;

the barrier discharge lamps being arranged such that a first area of the substrate is irradiated by one dielectric barrier discharge lamp and a second area of the substrate is irradiated by another dielectric barrier discharge lamp, such that, during moving of the substrate, the first and second areas have an overlapping portion; and

a light screening means for screening part of the UV light irradiated onto the overlapping portion.

2. A substrate treatment device using dielectric barrier discharge lamps which are transported with respect to a substrate to be irradiated, and which irradiate the surface of this substrate with UV light comprising:

at least two dielectric barrier discharge lamps, wherein the length of the dielectric barrier discharge lamps in a lengthwise direction is less than a length in the direction perpendicular to the transport direction of the substrate;

the barrier discharge lamps being arranged such that a first area of the substrate is irradiated by one dielectric barrier discharge lamp and a second area of the substrate is irradiated by the other dielectric barrier discharge lamp, such that during transport of the substrate the first and second areas have an overlapping portion; and

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a light screening means which transition is effected between the two dielectric barrier discharge lamps.

3. The substrate treatment device of claim 1, wherein light screening means are arranged such that the amount of irradiation per unit of area on the substrate becomes essentially uniform after transport treatment.

4. The substrate treatment device of claim 2, wherein the light screening means are arranged such that the amount of irradiation per unit of area on the substrate becomes essentially uniform after transport treatment.

5. The substrate treatment device of claim 1, wherein the dielectric barrier discharge lamps are located in an essentially box-shaped lamp unit, with one side provided with light transmission windows, and wherein the respective light screening means is a light screening plate which is located in the light transmission window.

6. The substrate treatment device of claim 2, wherein the dielectric barrier discharge lamps are located in an essentially box-shaped lamp unit, with one side provided with light transmission windows, and wherein the respective light screening means is a light screening plate which is located in the light transmission window.

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